

Phase 2 Comprehensive Acquisition Plan (CAP)

Heart of Iowa Regional Transit Agency ITS4US Deployment Project

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16. Abstract Heart of Iowa Regional Transit Agency (HIRTA) is one of four awardees for Phase 2 of the ITS4US program for its proposed concept “Health Connector: Bridging the Gap Between Healthcare and Transportation” (Health Connector) by the United States Department of Transportation (USDOT). Per the goals of the program, Health Connector project is focused on improving transportation access to healthcare for all groups in Dallas County, Iowa. This document serves as the Comprehensive Acquisition Plan (CAP) for HIRTA. The CAP describes the procurement processes for Health Connector’s mobility on demand solution, including the acquisition schedule, acquisition approach, and vendor outreach process. The CAP also identifies any and all other software and hardware that has been or will be procured related to the Health Connector as well as the associated vendors and procurement processes. Apart from the mobility on demand platform, this primarily consists of wayfinding technologies and equipment as well as middleware products that will be developed.			
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1 Introduction

This document serves as the Comprehensive Acquisition Plan (CAP) for The Heart of Iowa Regional Transit Agency (HIRTA) “*Health Connector: Bridging the Gap Between Healthcare and Transportation*” (Health Connector) solution for the United States Department of Transportation’s (USDOT) ITS4US program. The CAP describes the procurement process for Health Connector’s mobility on demand solution, including the acquisition schedule, acquisition approach, and vendor outreach process. The CAP also identifies software and hardware that will be procured as part of the wayfinding solution, as well as potential vendors and details surrounding those procurement processes. Lastly, it identifies development efforts surrounding middleware development and related schedules and procedures. Due to its position in the overall project schedule, this CAP intends to both document past procurements and plan for future ones.

1.1 Intended Audience

The intended audience for the CAP include HIRTA and its deployment partners, the USDOT and the USDOT representatives. HIRTA deployment partners include Arcadis IBI Group, Community Transportation Association of America (CTAA), Iowa State University (ISU), Dallas County Health Department (DCHD), Capture Management Solutions (CMS), NaviLens and Via. The CAP also serves as a document for future MOD implementors and equipment installation specialists.

1.2 Project Background

HIRTA provides over 300,000 customer rides and operates 95,000 hours (2019 estimates; pre-pandemic) along with 1.3 million miles of service within the seven-county region encircling the Des Moines urban area. HIRTA provides demand response services to customers for all trips booked from 24 hours to up to 14 days in advance. If capacity is available, HIRTA also provides trips to meet same day requests. HIRTA also acts as a service provider for the State of Iowa Medicaid broker, Access2Care.

Health Connector is an innovative solution that will address various bottlenecks associated with transportation access to healthcare for HIRTA communities. Some of these challenges are key reasons behind missed appointments or the unacceptable level of preventive or as-needed healthcare in the HIRTA service area. For this deployment, the HIRTA team plans to implement a scalable and replicable solution that enables access to non-emergency medical transportation for all travelers by resolving transportation access barriers with the use of advanced technologies. This solution will allow Dallas County residents without access to transportation who may be seeking a medical appointment to explore their transportation alternatives and book both medical and transportation appointments at the same time through separate smart device (e.g., smartphone) applications or an equally effective alternate method. Further, this solution will include information and wayfinding services to guide them at every step of their trip.

This deployment will provide enhanced transportation access to healthcare options for all travelers in Dallas County with a specific focus on underserved communities, rural travelers, older adults,

and veterans. In addition to addressing mobility needs, the proposed deployment will recognize the net impact that access to health services has on patient healthcare outcomes as well as both the financial and health outcomes from the perspective of the healthcare community/Dallas County Health Department (DCHD).

HIRTA was awarded a Phase 2 agreement of the Complete Trip - ITS4US contract for its proposed concept “Health Connector: Bridging the Gap Between Healthcare and Transportation” (Health Connector) by the United States Department of Transportation (USDOT) to showcase innovative business partnerships, technologies, and practices that promote independent mobility for travelers regardless of location, income, or disability.



Figure 1. Overview of Health Connector System Concept (Source: HIRTA team)

For more information about the key capabilities of the proposed Health Connector technology, refer to the Phase 2 Concept of Operations (ConOps) and Phase 2 System Requirements Specifications (SyRS) documents [1] [2]. Health Connector will be deployed in Dallas County, Iowa. Dallas County comprises 18 municipalities, with the largest being West Des Moines (population 66,641), and the smallest being Bouton (population 119). Portions of Dallas County are located in the Des Moines – West Des Moines Metropolitan Statistical Area and the county features a mixture of suburban and rural densities.

Dallas County is one of the fastest growing counties in terms of population in the United States, with an increase of 36.4% since 2010 focused largely on the southeastern portion of the county in the western Des Moines suburbs. Dallas County was selected as a service area for this project since population growth, proximity to the Des Moines Metro, and unique public health program services available in Dallas County stood out as key determining factors.

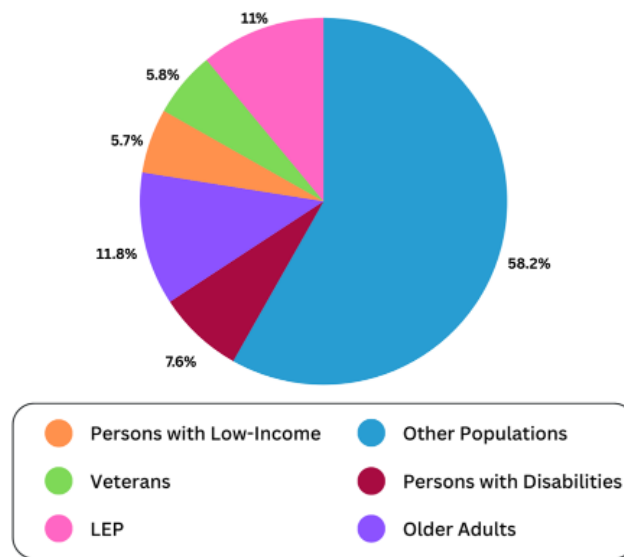


Figure 2. Population Breakdown in Dallas County (Source: HIRTA Team)

In 2019, out of a total population of 93,000, the county was home to approximately 3,700 persons with disabilities, 11,200 older adults, 4,000 low-income individuals, 4,000 veterans, and 10,500 people speaking a language other than English (Figure 2 shows the distribution of underserved populations in Dallas County). Dallas County's older adult population grew 12% from 2000 to 2010 and is expected to double by 2030. The overall growth represents a shift from an agricultural to a suburban commuter community. Such challenges require HIRTA to utilize the available driver and vehicle resources in the most efficient manner. The change in population brings opportunity and access to health care services for many residents but also exacerbates differences between the affluent eastern side of the county and the rural and other communities to the north and west. Older adults make up a larger portion of rural populations (17%) than urban populations (13%), and rural residents with disabilities rely on public transit and take about 50% more public transit trips than those who do not have disabilities.

1.3 Scope

The CAP serves to outline both completed and ongoing procurement and development processes for Health Connector hardware and software. This includes MOD platform software, wayfinding hardware, middleware software development, and any additional supporting hardware as outlined in the System Architecture Document (SAD) and Concept of Operations [3] [1].

Technical descriptions and specifications found in this document are expanded upon in the forthcoming System Design Document (SDD) [4]. The CAP also defines the relationship of commercial-off-the-shelf (COTS) products to system requirements (found in the SyRS) and describes the potential or selected vendors and suppliers of those products where possible [2].

Certification requirements are also included in this document where applicable. Overall, the CAP describes the following elements:

- Technical Description
- Requirements and Specifications
- Certification Requirements
- Acquisition Method
- Potential Vendors
- Acquisition Schedule
- Ancillary Equipment

2 Acquisition Overview

The following sections outline the acquisition program for the Health Connector, including internal acquisition policies, acquisition approaches, and any pertinent regulations.

2.1 Acquisition Approach

The various components discussed in this document each have slightly different acquisition processes. The MOD platform is a COTS product that was acquired through an RFP process, whereas middleware products are being developed by a selected vendor (in this case, Arcadis IBI Group). The wayfinding subsystem will be acquired through a combination of contracting with a previously named vendor (Navilens) and micropurchasing other components through RedyRef and Safe Fleet. Both Arcadis IBI Group and Navilens were selected during Phase 1 of the project.

HIRTA has acquired or is acquiring the different system components through four methods:

1. **Formal Procurement:** For components acquired through procurement, HIRTA used an RFP process, in which an RFP was posted on Bidnet and vendors responded with proposals. For the MOD Platform, HIRTA utilized their standard procurement method of placing an RFP on Bidnet and used their standard scoring method to select a vendor. This process was used to select the MOD vendor.
2. **Micro-purchase:** HIRTA utilizes micro-purchasing to procure hardware components below \$50,000. For federal procurements, micro-purchases are capped at 10k, but HIRTA defines their threshold as 50k in line with the self-certification process outlined in the code of federal regulations described in section 200.320(a)(1)(iv). Any requirements as outlined in the self-certification process will be documented. Wayfinding kiosks and infotainment devices are to be acquired through micro-purchase.
3. **Contracting with a named vendor:** For wayfinding codes, HIRTA did not release a formal RFP, but rather partnered with NaviLens at the outset of the project with the understanding a licensing agreement would be established at a later date.
4. **Internal development:** Through discussions with Arcadis IBI Group, a named partner, HIRTA learned that the middleware products for Health Connector could be developed internally and budgeted accordingly at the outset of the project.

In keeping with guidelines for federal awards, HIRTA follows both informal and formal procurement methods. If the value of the procurement is below the “simplified acquisition threshold” (SAT), then HIRTA follows informal procurement methods for micro-purchases and small purchases. For procurements that exceed the SAT, HIRTA adheres to the following formal procurement methods:

1. **Sealed bids:** Sealed bids are a way in which bids are publicly solicited and a firm fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price.
2. **Proposals:** Proposals are a procurement method in which either a fixed price or cost-reimbursement type contract is awarded. Proposals are generally used when conditions are not appropriate for the use of sealed bids.

Additionally, HIRTA takes all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. These include, but are not limited to:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
6. Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in steps 1-5 in this section.

2.2 Acquisition Schedule

Table 1 shows the overall acquisition timeline for the various technologies and systems being obtained for Health Connector. Sections 3,4, and 5 include detailed acquisition schedules for each respective component. As dates are refined or added, this section will be updated to reflect current knowledge.

Table 1. HIRTA Health Connector Acquisition Schedule

Event Title	Start Date	End Date
MOD Platform	August 3, 2022	March 31, 2023
Middleware	July 7, 2023	April 19, 2024
Wayfinding Components	June 26, 2023	May 6, 2024
Infotainment Devices	November 15, 2023	May 13, 2024

2.3 Vendor Outreach Plan

For procurements, HIRTA's vendor outreach plan includes posting RFPs to Bidnet and sharing an advance, pre-bid notice of RFPs with qualified providers via email. Bidnet is the standard procurement platform at HIRTA. On Bidnet, HIRTA is able to input contact information, closing dates, pricing details, National Institute of Governmental Purchasing (NIGP) categories, and other information about the RFP. On the site, HIRTA is also able to see suppliers who match at least a minimum number of the solicitation's categories and allows for notification via email. For the MOD platform procurement, HIRTA had knowledge of MOD vendors from previous RFPs, trade shows, and other research; from this list of MOD vendors, HIRTA sent a pre-bid notice, to which known vendors could register for Bidnet and see the RFP. All other outreach regarding MOD platform procurement was done through Bidnet.

For micropurchasing, contracting, and internal development, processes for vendor outreach are more informal. HIRTA agreed to bring Arcadis IBI Group and NaviLens onboard for provision of middleware components and wayfinding codes through mutual agreement prior to Phase 1. Other vendor outreach, such as for kiosks, is being done through internet research and by way of recommendations from colleagues.

3 MOD Platform

3.1 Technical Description

The MOD platform includes software for transportation management, traveler booking, and driver navigation and operations. As such, this procurement reflected the acquisition of technologies affecting three core subsystems.

The MOD transportation management system (TMS) includes the technologies used to assist customer care and operations staff with traveler registration, eligibility management, reservations, scheduling, dispatching, billing, and administration activities. The MOD TMS fits within broader overall HIRTA TMS, which also supports operations beyond Health Connector operations.

The MOD driver application refers to the technologies deployed on vehicles to support driver-end functions for driver-dispatch communications, manifest management, support just-in-time dispatching, turn-by-turn navigation and outdoor wayfinding (e.g., to locate travelers at the time of pick up), on-board information and fare payments. On all HIRTA-owned vehicles, drivers will use tablets running the MOD driver app. On other vehicles, drivers may use the driver app on their tablet or their phone.

The Traveler application includes the tools and technologies used by travelers seeking transportation services for their healthcare appointments as part of their pre-trip, during trip, on arrival, and return trip activities. This includes the ability to plan, book, and pay for trips, as well as navigation to vehicles and along the route. The traveler application also provides real-time status of trips through push notifications.

Mobile/smart devices will be used as part of the traveler-end subsystem but are not a part of this procurement and not provided by the MOD vendor. For more detailed descriptions of the features of each of these MOD platform components, see the System Design Document [4].

3.2 Requirements and Specifications

For requirements related to the MOD Platform, see MOD TMS, Traveler App, and Driver App requirements listed in the Systems Requirements Specifications [2]. During the RFP process, system requirements for the MOD Platform were outlined in an attached excel document that outlined all requirements specific to the MOD platform. Respondents had an opportunity to indicate they would comply with the requirement, or, if they were unable to, indicate they could not and explain why.

3.3 Certification Requirements

All supplied software applications shall comply with established third-party certification authorities relevant to each platform. Access to system shall be made available to external users using secure and encrypted data exchange with cloud-based servers using standards such as Secure Sockets Layer (SSL) or Transport Layer Security (TLS) and shall avoid any exposure to PII for Travelers. HIRTA will act as a point of responsibility to monitor and control individual agreements and communicate risks.

3.4 Acquisition Method

The MOD Platform was acquired through procurement, through the methods outlined in Section 2.1, in which HIRTA publicly released an RFP to procure the Health Connector MOD Platform software. For the MOD Platform, HIRTA reviewed three bids and scored them. The top two scores were invited to present, in which a separate score was generated from the presentation for a final score. From this final score, the top scoring bidder was selected. All bids were reviewed to ensure they were acceptable and met the scope of work, and if not, they were not invited to move forward in the process.

3.5 Potential Vendors

HIRTA has selected Via to provide a COTS MOD Platform. Other vendors that submitted bids and that were considered included HBSS and TripSpark.

3.6 Acquisition Schedule

Table 2 shows the procurement schedule for the MOD platform, which was completed March 31, 2023.

Table 2. MOD Platform Procurement Overview Timeline

Event Title	Date
Finalize Scope of Work	July 22, 2022
Review SOW and Prepare RFP	July 29, 2022
Finalize Evaluation Committee	July 29, 2022
MOD RFP Release	August 3, 2022
Pre-Proposal Meeting	August 8, 2022
Vendor Questions Submission Period	August 15, 2022
HIRTA Q&A Response	August 22, 2022
Vendor Proposal Submission Period	September 16, 2022
Initial Proposal Evaluation	October 7, 2022
Invites Sent to Shortlisted Vendors for Presentations	October 10, 2022
Shortlisted Vendors Presentation and Scoring	October 28, 2022
Best and Final Offer Period	November 9, 2022
Final Vendor Selection	March 31, 2023
Issue Notice of Intent to Award	March 31, 2023

Event Title	Date
HIRTA Board Approval	April 7, 2023
Notice to Proceed	April 7, 2023

3.7 Ancillary Equipment

No additional ancillary equipment will need to be procured for operation the MOD Platform; all TMS software will run on existing HIRTA and healthcare partner equipment, including computers, phones, and on-board mobile data terminals (MDT) that HIRTA drivers use. In addition, third-party drivers may be required to use a personal cellular device to operate the MOD driver application. Travelers may rely on personal devices for trip planning and booking as well. While Travelers may need data to use software on personal devices, they can also use the Health Connector website, call in to book an appointment, or book over WiFi. Additionally, there is a low-data mode for application use. No equipment is being procured as part of Health Connector but is supporting equipment used to operate the software.

4 Middleware

4.1 MOD-Medicaid Middleware

4.1.1 Technical Description

This open-source MOD-Medicaid middleware product will facilitate data exchange between the MOD platform and the Medicaid broker system. This middleware will be external to the MOD Platform TMS but sits within the broader HIRTA TMS which includes functions that support health connector from outside of the MOD platform. Currently, Access2Care's system is used for booking and managing Medicaid trips. HIRTA is one of the providers used by Access2Care. Access2Care will continue to book Medicaid trips when requested by Travelers and request those trips from HIRTA. Medicaid trips will be ingested in the HIRTA system and at that point, a traveler using Medicaid benefits will be able to use Health Connector Traveler tools.

APIs facilitate 4 primary functions for data exchange between the MOD TMS and the Medicaid broker:

1. *Service Request from Medicaid broker:* Allows a Medicaid broker to send a request to the MOD software to confirm the availability of a vehicle/driver to meet a trip request.
2. *Service Confirmation from MOD software to Medicaid Broker:* Provides a response to a Medicaid Broker message with details of the driver, vehicle and expected fare.
3. *Trip Status:* MOD software will provide the status of a trip to the Medicaid Broker at a configurable interval or on-demand.
4. *Trip Performance:* MOD software will provide end of trip completion report to the Medicaid broker along with mileage and amount due.

This data will then be presented on a read-only webpage accessible by HIRTA staff and Access2Care staff, who can follow up as needed to ensure Travelers with appointments have scheduled transportation to and from the appointment if needed.

4.1.2 Requirements and Specifications

For requirements related to the MOD-Medicaid middleware, see middleware requirements listed in the Middleware Design Document in the Systems Design Document [4]. In addition, accessing the sandbox testing environment for the Medicaid broker required signing an NDA.

4.1.3 Certification Requirements

Certification of MOD-Medicaid software will likely not be required as front-end user facing web pages are not planned. HIRTA will act as a point of responsibility to monitor and control individual agreements and communicate risks.

4.1.4 Acquisition Method

Arcadis IBI Group was chosen as the Medicaid-MOD middleware developer through internal discussion with the Health Connector Team prior to Phase 2. During Phase 1, HIRTA asked IBI Group to provide services to develop the middleware product. As a result, the Phase 2/3 proposal included Arcadis IBI Group as the middleware vendor.

4.1.5 Potential Vendors

Arcadis IBI Group was selected to develop the middleware for Health Connector. No other vendors were considered and this development was not released for RFP.

4.1.6 Acquisition Schedule

The following table represents the acquisition and development schedule for the Medicaid-broker Middleware platform. This schedule will continue to be updated as development progresses. Table 3 shows the acquisition schedule for the Medicaid-broker Middleware platform.

Table 3. MOD-Medicaid Middleware Acquisition Schedule (also the Software Development Schedule)

Event Title	Start Date	End Date
Revised Middleware Requirements	July 3, 2023	March 22, 2024
Revised Middleware Design Document	October 16, 2023	March 29, 2024
MOD - Medicaid Middleware Development	August 18, 2023	May 6, 2024
LYFT TAPI Communications Channel Setup	October 18, 2023	October 23, 2023
Design specifications and interface prototypes	August 18, 2023	October 27, 2023
Software product development	October 23, 2023	May 6, 2024
Unit Testing	October 23, 2023	March 29, 2024
Functional Testing	January 22, 2024	April 19, 2024
Installation Testing	February 19, 2024	April 19, 2024
User Acceptance Testing	May 13, 2024	May 17, 2024

4.1.7 Ancillary Equipment

No additional ancillary equipment will need to be procured for the Medicaid-broker middleware. The middleware will run on existing HIRTA equipment as outlined in section 3.7. The Medicaid-broker middleware will be an open-source software product developed for Health Connector and

could operate on other ancillary equipment in the future such as other personal devices and computers.

4.2 MOD-Electronic Health Record Middleware

4.2.1 Technical Description

A second middleware product will facilitate data exchange between the MOD platform and the electronic health record (EHR) subsystem. EHRs refer to the systems used by partner hospitals and clinics for booking medical appointments and maintaining their appointments, including discharge and any subsequent referral activities. Healthcare partners use different EHR services, which typically provide an available API. If no APIs are available, alternative approaches may be used to automate ingestion of appointment information or allow for upload within a dashboard to compare data. Health Connector will develop a new interface with at least one of the healthcare partners' EHR systems.

The APIs used for this solution will facilitate 4 primary functions for data exchange between the MOD TMS and the EHR Software:

1. *Confirmed Medical Appointment Data*: Ability for the MOD TMS to receive a message that provides the details of the medical appointment data (e.g., date, time and location) from the EHR software.
2. *Trip Booking Confirmation*: Provides a response from the MOD software to EHR software requests with confirmation of booking according for a medical appointment.
3. *Medical Appointment Change or Cancellation*: Ability for the MOD TMS to receive a message that provides the details of the modified medical appointment data and current status (e.g., active or cancellation request) from the EHR software.
4. *Trip Performance*: MOD software will provide end of trip completion report to the Medicaid broker along with mileage and amount due.

This data will then be presented on a read-only webpage accessible by HIRTA staff and healthcare staff, to ensure Travelers with appointments have scheduled transportation to and from the appointment if needed.

4.2.2 Requirements and Specifications

For requirements related to the MOD-EHR middleware, see requirements listed in the Middleware Design Document in the Systems Design Document [4]. In addition, accessing the sandbox testing environment for the EHR required advanced set up and coordination with the EHR provider.

4.2.3 Certification Requirements

All supplied software applications shall comply with established third-party certification authorities relevant to each platform. HIRTA will act as a point of responsibility to monitor and control individual agreements and communicate risks.

4.2.4 Acquisition Method

Arcadis IBI Group was selected to develop the middleware for Health Connector. No other vendors were considered and this development was not released for RFP. During Phase 1, HIRTA asked Arcadis IBI Group to provide services to develop the middleware product. As a result, the Phase 2/3 proposal included Arcadis IBI Group as the middleware vendor.

4.2.5 Potential Vendors

HIRTA selected Arcadis IBI Group to develop both the Medicaid- broker Middleware and EHR Middleware.

4.2.6 Acquisition Schedule

The following table represents the acquisition and development schedule for the EHR Middleware platform. This schedule will continue to be updated as development progresses.

Table 4. EHR Middleware Acquisition Schedule (also the Software Development Schedule)

Event Title	Start Date	End Date
MOD - EHR Middleware Development	June 5, 2023	March 29, 2024
Develop interface prototypes	August 18, 2023	October 27, 2023
Software product development	October 23, 2023	March 29, 2024
Unit testing	October 23, 2023	March 29, 2024
Functional testing	January 22, 2024	March 29, 2024
Installation testing	February 19, 2024	March 29, 2024
User Acceptance Testing	May 13, 2024	May 17, 2024

4.2.7 Ancillary Equipment

No additional ancillary equipment will need to be procured explicitly for the EHR middleware. The middleware will run on existing HIRTA equipment outlined in Section 3.7. Middleware could also be operated on care facility devices, such as existing computers in hospitals, which are not being procured as part of this project. As an open-source software product developed for Health Connector, MOD-EHR middleware could operate on other ancillary equipment in the future such as other personal devices and computers.

5 Wayfinding Technologies

5.1 Technical Description

The traveler-facing wayfinding subsystem refers to the technologies and infrastructure to be used for providing outdoor wayfinding, indoor positioning, orientation, and translation services on request to travelers. There are three potential components used for wayfinding under Health Connector. First, a combination of wayfinding applications and NaviLens codes, similar to QR codes, can help Travelers by providing guidance and directions to and from vehicles as well as within facilities via visual and/or audio references. These codes can also be scanned as part of translation services or other information pertinent to care facility processes. Second, wayfinding kiosks at care facilities can offer real-time information on traveler trips by providing navigation services through application interfaces, and/or could provide static wayfinding information for care facilities. Third, infotainment devices will be acquired to display relevant information about appointments and facilities while on-board HIRTA vehicles.

5.2 Acquisition Schedule

The wayfinding subsystem consists primarily of commercial off-the-shelf products, including NaviLens codes, the wayfinding application, infotainment devices, and a kiosk located at Dallas County Hospital. Table 5 shows the acquisition and development schedule for the wayfinding subsystem. After the wayfinding subsystem contract is finalized, the only configuration necessary includes discussions within HIRTA on the location of NaviLens codes. This schedule will continue to be updated as development progresses.

Table 5. Traveler-facing Wayfinding Subsystem Acquisition Schedule

Event Title	Start Date	End Date
Signing Contract with Navilens	June 26, 2023	October 26, 2023
Installation planning with Care Facilities and HIRTA	October 1, 2023	November 10, 2023
Code Acquisition	March 25, 2024	March 25, 2024
Installation and placement of codes	May 6, 2024	May 6, 2024
Wayfinding Kiosk Vendor research	September 18, 2023	October 27, 2023
Wayfinding Kiosk Purchase	February 23, 2024	February 23, 2024
Wayfinding Kiosk Delivery and installation	March 25, 2024	March 25, 2024
Infotainment Device Research and Negotiation	January 1, 2024	March 29, 2024
Infotainment Device Purchase	April 19, 2024	April 19, 2024
Infotainment Device Delivery and Installation	May 6, 2024	May 6, 2024

5.3 Requirements and Specifications

For requirements related to the wayfinding subsystem, see wayfinding requirements listed in the Systems Requirements Specifications [2].

5.4 Certification Requirements

All supplied software applications shall comply with established third-party certification authorities relevant to each platform. Access to system shall be made available to external users using secure and encrypted data exchange with cloud-based servers using standards such as Secure Sockets Layer (SSL) or Transport Layer Security (TLS) and shall avoid any exposure to PII for Travelers. HIRTA will act as a point of responsibility to monitor and control individual agreements and communicate risks.

5.5 Part Numbers/Quantities

The total number of components that are acquired and installed will be updated as Phase 2 progresses. This inventory includes both primary installation components and spare parts. For kiosks, one kiosk will be installed and one computer component will be held as a spare. For wayfinding codes, ten will be installed at Dallas County Hospital, ten will be installed on vehicles, and five will be kept as spare in the initial phase. Note also that this list of codes includes both dynamic codes that are paid and licensed from NaviLens, as well as free codes available for download through the packs accessible on the NaviLens website

The HIRTA team plans to acquire 10 infotainment devices which will include several spare. Just two vehicles will be used for Health Connector Operations in Phase 2 revenue testing and initial deployment. As additional vehicles are brought online, additional devices can be installed as needed.

5.6 Associated Software

NaviLens and NaviLens GO are the associated applications used by Travelers for wayfinding applications. The NaviLens app relays wayfinding and navigation information through audio only. NaviLens GO on the other hand can provide visual navigation, translation, trip planning information, and status of trip information to help user navigate care facilities and to board vehicles. By downloading the application(s) onto their personal devices, users will be able to use the wayfinding codes for navigation and/or translation. Note, however, that users will need mobile data or Wi-Fi on their devices to access application functionality. There is no other software required for users to operate wayfinding kiosks. Any content management software required to operate the kiosk and infotainment devices will be procured with the hardware. In addition, a booking and trip status webpage that is being developed specifically for the kiosk will operate on the device.

5.7 Acquisition Method

NaviLens will provide the wayfinding phone applications and NaviLens codes to be used for its navigation system. HIRTA will enter into a software as a service license agreement for the duration of phase 2 and 3 which will include an upfront cost for using the codes and accessing the platform used to manage content behind the codes. In addition, using the codes will then require individual annual or monthly costs, unless free codes downloaded from the NaviLens website are utilized. Free codes are less dynamic but benefit the user from no ongoing cost. It is anticipated that Dallas County Hospital will use free codes at least initially, while HIRTA vehicle codes are more permanent fixtures that require annual or monthly fees. NaviLens was selected as the wayfinding vendor during phase 1 of the project. NaviLens was selected primarily having had previous experience with Arcadis IBI Group deploying wayfinding solutions. They also provide backend software used for managing codes and altering information.

The wayfinding kiosks will be acquired through micropurchase. HIRTA selected Redyref to be the wayfinding kiosk vendor after conducting research and consulting with industry peers on features and costs. Infotainment devices will also be acquired through micropurchase. The vendor selected for those devices is Safe Fleet. This vendor was selected after research and consultation with other current HIRTA vehicle hardware vendors.

5.8 Potential Vendors

HIRTA acquired the indoor wayfinding vendor through internal discussions with Arcadis IBI Group. Based on previous experience, Arcadis IBI Group proposed NaviLens as a possible vendor for the Health Connector and they were included from the project outset. HIRTA selected NaviLens for wayfinding codes by contracting with a named vendor. NaviLens was selected primarily due to having had previous experience with Arcadis IBI Group deploying wayfinding solutions. Additionally, HIRTA acquired wayfinding kiosks through RedyRef and acquired infotainment devices through Safe Fleet. Additional infotainment device components may be acquired directly by HIRTA without going through a third-party vendor.

5.9 Ancillary Equipment

Table 6 discusses the components included in the wayfinding subsystem. This table will continue to be updated as development progresses.

Table 6. Wayfinding Subsystem Ancillary Equipment

Equipment	Description
Wayfinding Kiosks	Physical stations which send Travelers wayfinding guidance and/or assist with booking trips from care facilities. Refers to both physical infrastructure (i.e. tablets) and CMS needed for operation.
NaviLens Codes	Physical matrix barcodes that are scanned to provide guidance via the NaviLens or NaviLens GO mobile app.

Equipment	Description
NaviLens CMS	Allows for editing of content behind codes by any product owner or designated affiliate. Will be procured and deployed as part of contracting with NaviLens.
Infotainment Devices	Digital screens on HIRTA vehicles that will be used to display relevant information about appointments and facilities for travelers. This also includes a media player and additional hardware as needed for GPS functionality.

6 References

[1] Phase 1 Concept of Operations (ConOps): Heart of Iowa Regional Transit Agency ITS4US Deployment Project (FHWA-JPO-21-859) <https://rosap.ntl.bts.gov/view/dot/57469>

[2] Phase 1 System Requirements Specification (SyRS) — Heart of Iowa Regional Transit Agency ITS4US Deployment Project (FHWA-JPO-21-882) <https://rosap.ntl.bts.gov/view/dot/61724>

[3] Phase 2 System Architecture Document: Heart of Iowa Regional Transit Agency ITS4US Deployment Project (FHWA-JPO-22-983) <https://rosap.ntl.bts.gov/view/dot/68863>

[4] Systems Design Document, to be published

[5] MOD Platform Compliance Matrix

Appendix A. Definitions, Acronyms, and Abbreviations

Term	Description
AR	Augmented Reality
CAP	Comprehensive Acquisition Plan
CMS	Capture Management Solutions
ConOps	Concept of Operations
COTS	Commercial Off-the-shelf
CTAA	Community Transportation Association of America
DCHD	Dallas County Health Department
EHR	Electronic Health Record
HIRTA	Heart of Iowa Regional Transit Agency
ISU	Iowa State University
IVR	Interactive Voice Response
MDT	Mobile Data Terminal
MOD	Mobility On Demand
RFP	Request for Proposal
SA	System Architecture Document
SAT	Simplified Acquisition Threshold
SDD	System Design Document
SDD	System Design Document
SyRS	System Requirements Specifications
TMS	Transportation Management System
USDOT	United States Department of Transportation

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